

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A reflection type mask blank for EUV exposure, comprising:
a substrate;
a multilayer film which is formed on the substrate so as to reflect ~~an EUV~~ a light ray; and
a light absorber layer which is formed on the multilayer film so as to absorb the EUV light ray[;], and

a stress correction film which corrects warping of a surface of the multilayer film and which is placed between the substrate and the multilayer film or on a back surface of the substrate, the warping being formed by warping of the substrate and stress of the multilayer film;

wherein the stress correction film is made of material containing Ta as a major component and at least B,

~~wherein~~ the multilayer film has flatness with respect to a surface thereof, and
the flatness is 100 nm or less.

2. (currently amended): A reflection type mask blank for EUV exposure, comprising:
a substrate;
a multilayer film which is formed on the substrate so as to reflect ~~an EUV~~ a light ray; and
a light absorber layer which is formed on the multilayer film so as to absorb the EUV light ray; and

a stress correction film which corrects warping of a surface of the multilayer film and which is placed between the substrate and the multilayer film or on a back surface of the substrate, the warping being formed by warping of the substrate and stress of the multilayer film;

wherein the stress correction film is made of material containing Cr and N, N having a ratio between 5 and 35 at%,

the multilayer film has flatness with respect to a surface thereof, and
the flatness is 100 nm or less.

~~wherein the warping is formed by warping of the substrate and stress of the multilayer film.~~

3. (currently amended): A mask blank as claimed in claim 1 or 2, wherein:
the light ray is an EUV light ray, and
the reflection type mask blank for exposure is a reflection type mask blank for EUV exposure

~~the stress correction film has tensile stress, and is placed between the substrate and the multilayer film.~~

4. (currently amended): ~~A mask blank as claimed in claim 2~~ A reflection type mask for exposure, wherein:

~~the stress correction film has compressive stress, and is placed on a back surface of the substrate~~ a pattern of the light absorber layer is formed by patterning the light absorber layer using the reflection type mask blank for exposure claimed in claim 1 or 2.

5. (currently amended): A method for manufacturing a semiconductor device, wherein:
a pattern is formed on the substrate by using the reflection type mask for exposure claimed in claim 4. ~~mask blank as claimed in any one of claims 2 through 4,~~
wherein:

~~the stress correction film is made of material containing Ta~~

6. (currently amended): A substrate, comprising:
a multilayer film for reflecting a light ray onto the substrate; and
a stress correction film which corrects warping of a surface of the multilayer film and which is placed between the substrate and the multilayer film or on a back surface of the substrate, the warping being formed by warping of the substrate and stress of the multilayer film;
wherein the stress correction film is made of material containing Ta as a major component and at least B,

the multilayer film has flatness with respect to a surface thereof, and
the flatness is 100 nm or less.

~~mask blank as claimed in claim 5, wherein:~~
~~the stress correction film is made of material containing Ta as a major component and at least B.~~

7. (currently amended): A substrate, comprising:

a multilayer film for reflecting a light ray onto the substrate; and
a stress correction film which corrects warping of a surface of the multilayer film and
which is placed between the substrate and the multilayer film or on a back surface of the
substrate, the warping being formed by warping of the substrate and stress of the multilayer film;
wherein the stress correction film is made of material containing Cr and N, N having a
ratio between 5 and 35 at%.

the multilayer film has flatness with respect to a surface thereof, and
the flatness is 100 nm or less ~~reflection type mask for EUV exposure produced by using~~
~~the reflection type mask for EUV exposure blank claimed in claim 1 or 2.~~

8. (currently amended): A method for manufacturing a reflection type mask for EUV exposure produced by using the reflection type mask for EUV exposure blank claimed in claim 1 or 2.

9. (currently amended): A method for manufacturing a semiconductor device, wherein:
a pattern is transferred on the substrate by using the reflection type mask for EUV exposure claimed in claim 7.

10. (currently amended): A substrate with a multilayer film for reflecting ~~an EUV~~ a light ray onto a substrate, wherein:
the multilayer film has flatness with respect to a surface thereof, and
the flatness is 100 nm or less.

11. (currently amended): A substrate with a multilayer film for reflecting ~~an EUV~~ a light ray onto a substrate, comprising:
a stress correction film which corrects warping of a surface of the multilayer film,
the warping being formed by warping of the substrate and stress of the multilayer film.

12. (currently amended): ~~An EUV~~ A reflection mirror produced by using the substrate with the multilayer film as claimed in claim 10 or 11.

13. (original): A reflection type mask blank for exposure, comprising:
a substrate;
a multilayer film which is formed on the substrate so as to reflect a light ray; and
a light absorber layer which is formed on the multilayer film so as to absorb the light ray;

wherein the multilayer film has flatness with respect to a surface thereof, and the flatness is 100 nm or less.

14. (original): A reflection type mask blank for exposure, comprising:

a substrate;

a multilayer film which is formed on the substrate so as to reflect a light ray;

a light absorber layer which is formed on the multilayer film so as to absorb the light ray;

and

a stress correction film which corrects warping generated on a surface of the multilayer film when the stress correction film is not formed.

15. (original): A reflection type mask for exposure produced by using the reflection type mask blank for exposure claimed in claim 13 or 14.